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10/511,868	10/16/2004	Kwok Hong Luk	CN02 0008 US	8915
23429 7590 08/04/2008 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER MOON, SEOKYUN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,868

Applicant(s)

LUK, KWOK HONG

Examiner

SEOKYUN MOON

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 6-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2 and 6-13 is/are rejected.
7) ☒ Claim(s) 14-18 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 04/09/2008
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. The Applicant's arguments filed on April 09, 2008 have been fully considered.
2. The Applicant [Remarks: pg 6 4th paragraph] argued, "*Nitta does not teach, disclose or suggest the display parameters belonging to a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*".

Examiner respectfully disagrees.

Claim 1 discloses, "*the display parameters **belonging to** a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*". Examiner respectfully submits that the limitation, "*the display parameters belonging to a group*" does not necessarily mean that the display parameters are all the parameters included in the group. In other words, if the display parameter is one of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, then the display parameter is one of the parameters included in the group, and thus the display parameter belongs to the group. Since Nitta teaches the display parameter as being one of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, Nitta does teach the claim limitation.

The Applicant [Remarks: pg 7 last paragraph] argued, "*The Examiner's interpretation of the prior art EDID as application in the Office Action at page 3, lines 1-6 is simply wrong and unreasonable to a person of ordinary skill in the art who would at once recognize that data and application are not one and the same*".

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Examiner respectfully disagrees.

Examiner respectfully submits that the Applicant has failed to provide a rationale for the Applicant's assertion. The above disclosed statement is merely the Applicant's assertion, but does not contain any support or explanation regarding the assertion. Examiner further submits that EDID is a type of data application.

The Applicant [Remarks: pg 8 2nd paragraph] argued, *"The Examiner's interpretation of the prior art EDID as the claimed display parameters in the Office Action at page 4, line 4 from bottom, is improper, because the prior art EDID is related to the panel, rather than an application as presently claimed"*.

Examiner respectfully disagrees.

As explained above, Examiner construed EDID as a type of data application. Thus, all the parameters of EDID are related to data application.

The Applicant argued, *"Moon does not teach, disclose, or suggest means for providing said display parameters to an interface between the electronic apparatus and the display device"* [Remarks: pg 8 5th paragraph] and *"Moon does not disclose that the processing circuit 26 provides the parameters stored in the ROM 28 and RAM 30 to the display screen 22. In FIG. 2, the ROM 28 and RAM 30 do not provide the stored parameters to the display screen 22"* [Remarks: pg 8 last 3 lines].

Examiner respectfully disagrees.

As clearly explained in the previous Office Action [pg 8 lines 5-8], Examiner construed **graphics or images** related to the software application and/or the **vertical scanning frequency/the horizontal scanning frequency** of the display panel, which are used for displaying graphical user interface of the software applications on the display panel as display parameters. Since it is **required** to provide graphics or images related to the software application and/or the vertical scanning frequency/the horizontal scanning frequency of the display panel to the display panel in order to display images/graphics properly,

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the outputting means of the processing circuit 26 does provide the data stored in ROM 28 and RAM 30 to the display screen 22.

The Applicant [Remarks: pg 9 2nd paragraph] argued, "*Moon does not teach, disclose or suggest the display parameters belonging to a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*".

Examiner respectfully disagrees.

Claim 1 discloses, "*the display parameters **belonging to** a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*". Examiner respectfully submits that the limitation, "*the display parameters belonging to a group*" does not necessarily mean that the display parameters are all the parameters included in the group. In other words, if the display parameter is one of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, then the display parameter is one of the parameters included in the group, and thus the display parameter belongs to the group. Since Moon teaches the display parameter as being one of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, Moon does teach the claim limitation.

The Applicant [Remarks: pg 10 2nd paragraph] argued, "*According to paragraph [0030], lines 6-10 of Nitta, synchronously with a clock from a DDC clock line 27 received at serial clock terminals 23a and 25a, the memories 23 and 25 output the EDID from serial data terminals 23b and 25b to a DDC data line 29. In other words, the part of the multiplexer 31 connects DDC clock line 27 and passes clock from the DDC clock line 27 to the lines A0 or A1 according to the clock from the DDC clock line 27. The clock received by the multiplexer 31 is a signal for synchronization. The part of the multiplexer 31*

receiving the clock can not be used to recognizing an identification code at an interface between the electronic apparatus and display device”.

Examiner respectfully disagrees.

Examiner respectfully submits that the multiplexer 31 does not connect one of the lines A0 and A1 to the DDC clock line 27 according to the clock from the DDC clock line 27. In fact, it is not possible for the multiplexer to connect an input line to one of two output lines based on the content of the input line. In the device of Nitta, the operation of the multiplexer is determined based on the code inputted at the selector terminal 31a and based on the code inputted at the terminal, the multiplexer connects one of the lines A0 and A1 to the DDC clock line 27.

The Applicant [Remarks: pg 11] argued, “*Moon does not teach, disclose or suggest the display parameters belonging to a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*”.

Examiner respectfully disagrees.

Claim 9 discloses, “*the display parameters **belonging to** a group consisting of: a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device*”. Examiner respectfully submits that the limitation, “*the display parameters belonging to a group*” does not necessarily mean that the display parameters are all the parameters included in the group. In other words, if the display parameter is one of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, then the display parameter is one of the parameters included in the group, and thus the display parameter belongs to the group. Since Moon teaches the display parameter as being one of a number of lines to be displayed, a

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number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device, Moon does teach the claim limitation.

The Applicant [Remarks: pg 12 1st paragraph] argued, “*Moon does not teach, disclose, or suggest providing said display parameters from the electronic apparatus to the display device*”. Examiner respectfully disagrees.

As clearly explained in the previous Office Action [pg 9], Examiner construed **graphics or images** related to the software application and/or the **vertical scanning frequency/the horizontal scanning frequency** of the display panel, which are used for displaying graphical user interface of the software applications on the display panel as display parameters. Since it is **required** to provide graphics or images related to the software application and/or the vertical scanning frequency/the horizontal scanning frequency of the display panel to the display panel in order to display images/graphics properly, the outputting means of the processing circuit 26 does provide the data stored in ROM 28 and RAM 30 to the display screen 22.

For the foregoing reasons, Examiner respectfully submits that the Applicant's arguments regarding the rejections made in the previous Office Action are not persuasive.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 2, 6, and 8** are rejected under 35 U.S.C. 102(b) as being anticipated by Nitta.

As to **claim 1**, Nitta teaches an electronic apparatus (the electronic components shown on fig. 2 excluding “ASIC 21” and “receptacle 9”) suitable for displaying information via a display device (a

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combination of “*display screen*” and “*ASIC 21*”) [par. (0029) lines 1-3], the display device having a display panel (“*display screen*”) provided with driving electronics (“*ASIC 21*”), the electronic apparatus comprising a controller (“*multiplexer 31*”) [fig. 2] for selecting at least one application (“*EDID for the VGA interface*” or “*EDID for the DVI-I interface*”) for the display device [par. (0031), emphasis on lines 4-5] and further comprising memory means (“*memories 23 or 25*”) for storing at least display parameters (the parameters included in “*EDID for the VGA interface*” or “*EDID for the DVI-I interface*”) related to the application and means (“*DDC clock line 27*” and “*DDC data line 29*”) for providing the display parameters to an interface between the electronic apparatus and the display device [fig. 2], the display parameters belonging to a group consisting of: a number of lines to be displayed (par. (0011) lines 4-8, note that resolution is referred to as a number of pixel columns by the number of pixel rows, thus the number of lines to be displayed is equivalent to the number of pixel rows), a number of columns to be displayed (par. (0011) lines 4-8, note that resolution is referred to as a number of pixel columns by the number of pixel rows, thus the number of columns to be displayed is equivalent to the number of pixel columns), parameters (“*frequency of vertical scan signals*”) related to driving transistors of the display device, and power saving parameters for the display device [par. (0011) lines 4-8 and par. (0052)].

As to **claim 2**, Nitta teaches the electronic apparatus further comprising memory means (“*memories 23 or 25*”) [fig. 2] for storing parameters (“*EDID for the VGA interface*” or “*EDID for the DVI-I interface*”) related to the selection of driving transistors [par. (0011) lines 4-8].

As to **claim 6**, Nitta teaches a display device (a combination of “*display screen*” and “*ASIC 21*”) [par. (0029) lines 1-3] for use in an electronic apparatus (a combination of the electronic components shown on fig. 2 excluding “*ASIC 21*” and “*receptacle 9*”, and “*display screen*”) comprising a controller (a part of the “*multiplexer 31*” controlling the signal transmission from the lines “*B0*” or “*B1*” to the “*receptor 9*”) [fig. 2] for selecting at least one application (“*EDID for the VGA interface*” or “*EDID for the DVI-I interface*”) for the display device [par. (0031), emphasis on lines 4-5] and further comprising

memory means ("*memories 23 or 25*") for storing at least display parameters (the parameters included in "*EDID for the VGA interface*" or "*EDID for the DVI-I interface*") related to the application and means ("*DDC clock line 27*" and "*DDC data line 29*") for providing the display parameters to an interface ("*receptor 9*") between the electronic apparatus and the display device [figs. 1 and 3], the display parameters belonging to a group consisting of: a number of lines to be displayed (par. (0011) lines 4-8, note that resolution is referred to as a number of pixel columns by the number of pixel rows, thus the number of lines to be displayed is equivalent to the number of pixel rows), a number of columns to be displayed (par. (0011) lines 4-8, note that resolution is referred to as a number of pixel columns by the number of pixel rows, thus the number of columns to be displayed is equivalent to the number of pixel columns), parameters ("*frequency of vertical scan signals*") related to driving transistors of the display device, and power saving parameters for the display device [par. (0011) lines 4-8 and par. (0052)], the display device comprising:

a display panel ("*display screen*") provided with driving electronics; and

means (a part of the "*multiplexer 31*" controlling the signal transmission from the "*receptor 9*" to the lines "*A0*" or "*A1*") for recognizing an identification code at an interface between the electronic apparatus and the display device [pars. (0043) and (0049)].

As to **claim 8**, Nitta teaches the display parameters ("*frequency of vertical scan signals*" and "*frame rate*") [par. (0011) lines 4-8] including at least one of a gate select width, a gate enable width ("*frame rate*" and "*frequency of vertical scan signals*" indicates how long it takes for each of the gates of the transistors included in the display panel to be enabled again after each of the gates of the transistors are enabled once), and a power saving pulse width.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta.

As to **claim 6**, Nitta teaches a display device ("*display 8*") [fig. 1] for use in an electronic apparatus comprising a controller (the CPU of the "*computer 1*") for selecting at least one application (various software applications installed in the "*computer 1*") for the display device and further comprising memory means (the memory of the computer, storing graphics or images related to the software applications) for storing at least display parameters related to the application and means (the output port of the "*computer 1*") for providing the display parameters to an interface between the electronic apparatus and the display device, the display device comprising:

a display panel provided with driving electronics; and

means ("*multiplexer 31*") for recognizing identification code at an interface between the electronic apparatus and the display device [pars. (0043) and (0049)].

Nitta does not expressly teach the type of the display device.

However, Examiner takes Official Notice that it is well known in the art to use a LCD as a display device for an electronic apparatus.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Nitta to be LCD since LCD is well known for high native resolution and low power consumption.

Nitta as modified above teaches the display parameters belonging to a group consisting of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving

transistors of the display device, and power saving parameters for the display device (note that, in LCD, in order to display a graphic or an image, it is required to change either the amplitude of image signals or the time duration of providing image signals which are fed to the driving transistors).

As to **claim 7**, Nitta inherently teaches the driving electronics comprising storage means (such as buffers included in a data driver of a display panel) for storing a sequence of parameters controlling the panel received via the interface from the electronic apparatus since it is required for a data driver for a liquid crystal display to store graphic/image data signals temporarily (for example, for one horizontal scanning period or for one vertical scanning period) in order to display images or graphics corresponding to the received data signals, without any delay.

7. **Claims 1, 2, and 8-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US 6,085,098).

As to **claim 1**, Moon [fig. 1] teaches an electronic apparatus suitable for displaying information via a display device, the display device having a display panel provided with driving electronics, the electronic apparatus comprising a controller ("*processing circuit 26*") [fig. 2] for selecting at least one application (the various software applications shown on fig. 3) for the display device and further comprising memory means (the memory of the device storing the various software applications and/or the memory storing a vertical scanning or a horizontal scanning frequency of the display panel) for storing at least display parameters (graphics or images related to the software application and/or the vertical scanning frequency/the horizontal scanning frequency of the display panel, which are used for displaying graphical user interface of the software applications on the display panel) related to the application [col. 3 lines 63-65] and means (outputting means of the "*processing circuit 26*") for providing the display parameters to an interface (wires or connections between the display device and the electronic apparatus) between the electronic apparatus and the display device.

Moon does not expressly teach the type of the display device.

However, Examiner takes Official Notice that it is well known in the art to use a LCD as a display device for an electronic apparatus.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Moon to be LCD since LCD is well known for high native resolution and low power consumption.

Moon as modified above teaches the display parameters belonging to a group consisting of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device (note that, in LCD, in order to display a graphic or an image, it is required to change either the amplitude of image signals or the time duration of providing image signals which are fed to the driving transistors).

As to **claim 2**, Moon as modified above inherently teaches the electronic apparatus comprising memory means for storing parameters related to the selection of driving transistors since it is required for an electronic apparatus such as PDA, a cell phone, or a laptop, including a liquid crystal display to store a vertical scanning frequency or a horizontal scanning frequency (which are related to the selection of driving transistors) in order to display images.

As to **claim 8**, Moon as modified above teaches the display parameters (the vertical scanning frequency or the horizontal scanning frequency, as discussed with respect to the rejection of claim 2) including at least one of a gate select width, a gate enable width (the vertical scanning frequency or the horizontal scanning frequency indicates how long it takes for each of the gates of the transistors included in the display panel to be enabled again after each of the gates of the transistors is enabled once), and a power saving pulse width.

As to **claim 9**, Moon teaches a method of an electronic apparatus [fig. 2] controlling a display device for at least one application (the various software applications shown on fig. 3), the method comprising:

programming into a memory of the electronic apparatus display parameters (the memory of the device storing the various software applications and/or the memory storing a vertical scanning or a horizontal scanning frequency required to drive a plurality of pixels included the display panel, in order to display images properly) related to the application [col. 3 lines 63-65]; and

providing the display parameters from the electronic apparatus to the display device ("22") [fig. 2].

Moon does not expressly teach the type of the display device.

However, Examiner takes Official Notice that it is well known in the art to use a LCD as a display device for an electronic apparatus.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Moon to be LCD since LCD is well known for high native resolution and low power consumption.

Moon as modified above teaches the display parameters belonging to a group consisting of a number of lines to be displayed, a number of columns to be displayed, parameters related to driving transistors of the display device, and power saving parameters for the display device (note that, in LCD, in order to display a graphic or an image, it is required to change either the amplitude of image signals or the time duration of providing image signals which are fed to the driving transistors).

As to **claim 10**, Moon teaches the method comprising storing the display parameters in a memory of the display device [col. 3 lines 63-65].

As to **claim 11**, Moon teaches the display parameters (the vertical scanning frequency or the horizontal scanning frequency) including at least one of a gate select width, a gate enable width (the vertical scanning frequency or the horizontal scanning frequency indicates how long it takes for each of the gates of the transistors included in the display panel to be enabled again after each of the gates of the transistors is enabled once), and a power saving pulse width.

As to **claim 12**, Moon [fig. 3] teaches the controller (“*processing circuit 26*”) [fig. 2] being adapted to select the one application from a group of applications including both a telephone application (“*phone dial 52*”) and a calculator application (“*calculator 48*”).

As to **claim 13**, Moon teaches the application being one of a telephone application and a calculator application [fig. 3].

Allowable Subject Matter

8. **Claims 14-18** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEOKYUN MOON whose telephone number is (571)272-5552. The examiner can normally be reached on Mon - Fri (8:30 a.m. - 5:00 p.m.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 1, 2008

/S. M./

Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629